25 Appeal Brief 5/24/01 KPowell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT:	Richard D. Cappels, Sr.
SERIAL NO.:	08/900,964
FILING DATE:	July 25, 1997
TITLE:	SYSTEM AND METHOD FOR GENERATING HIGH-LUMINANCE WINDOWS ON A COMPUTER DISPLAY DEVICE
EXAMINER:	J. Nguyen
ART UNIT:	2778
ATTY. DKT. NO.:	P2106/757

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on the date printed below:

Date: January 19, 2001 David Lewis

David Lewis

COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

Appeal Brief

Sir;

This is an Appeal from the rejection of claims 26-45. For the convenience of the Board of Appeals and Interferences a table of contents for the remainder of this Appeal Brief follows on the next page.

~~01/26/2001 NPRASAS0 00000039 8900964~~
~~02 FC:120 310.00 OP~~

~~Replacement date: 01/30/2001 NPRASAS0~~
~~01/25/2001 NPRASAS0 00000039 8900964~~
~~02 FC:120 310.00 OP~~

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Real Party in Interest

The real party in interest in the above referenced patent application is Apple Computer, Inc. of Cupertino, California.

Related Appeals and Interferences

To the present knowledge of the Appellant's representative there are currently no related appeal or interference proceedings that will directly affect, or be directly affected by or have a bearing on the Board's decision in the present Appeal.

Related Applications

A continuation of this application was filed on November 1, 2000 relating to the subject matter of the claims of the non-entered amendment after final, filed August 24, 2000 in the present Application.

Status of the Claims

Claims 26, 27, 34-37, and 41-45 stand rejected under 35 USC §103(a) as unpatentable over McLaughlin et al. in view of Whitehead.

Claims 28-33 and 38-40 stand rejected under 35 USC §103(a) as unpatentable over McLaughlin et al. in view of Whitehead further in view of Lagoni.

Status of Amendments Filed Subsequent to Final Rejection

An amendment was filed on August 24, 2000 responsive to the Office Action mailed May 13, 2000. In an Advisory Action mailed September 12, 2000 the Examiner declined to

enter the amendment. Two more amendments of unknown status are being filed herewith.

Concise Statement of Issues

(1) Whether claims 26, 27, 34-37, and 41-45 are obvious over McLaughlin et al. in view of Whitehead.

(2) Whether claims 28-33 and 38-40 are obvious over McLaughlin et al. in view of Whitehead further in view of Lagoni.

A More Detailed Statement of Issues

Subsumed within these two issues are at least the following sub-issues:

Whether the combination of references proposed by the Examiner constitutes the claimed invention, which further subsumes at least the following sub-issues.

Whether McLaughlin et al. suggests (1) generating a window information signal based on a window control signal, and (2) a display control device that receives both a window information signal and a window control signal that are used to produce a processed video signal despite the lack of any explicit disclosure of such.

Whether selecting between an AVC and MVC signal in Lagoni's picture-in-a-picture device constitutes a "window generator" generating a "window information signal," as claimed.

Whether it would have been obvious to modify McLaughlin et al. using Whitehead in order "to allow the operator adjusting the brightness and/or contrast of the selected highlight area and/or the background image independently," even though McLaughlin et al. have no need for such an adjustment.

Whether McLaughlin et al. suggest making test window 300 a high-luminance window even though that may confuse the user regarding what the printed output will look like and thereby degrade the quality of the color conversion of the image, which is in the background.

Whether Whitehead "explains" the details of McLaughlin et al.'s alleged window generator and display control device despite a lack of corresponding components.

Whether Lagoni "explains" the details of Whitehead's gain control 70 despite a lack of corresponding components.

Whether it is suggested or even makes sense to use the highlight system of Whitehead, which also needs to be modified, to provide separate control of McLaughlin et al.'s calibration and color conversion of FIGs. 10 and 11, even though McLauglin et al.'s is already specially set up for matching the screen colors to a color print without Whitehead's teachings.

Whether combining Lagoni with the device of McLaughlin et al. as modified by Whitehead for the "motivation" of "[to provide] a sub-window [that] has a higher luminance," which is essentially a paraphrase of the preamble of the claims and has no clear basis in the references relied upon, is hindsight.

Whether McLaughlin et al., an interactive color conversion system for producing high quality prints, Whitehead, an interactive medical diagnostic tool, and Lagoni, a picture-in-a-picture for a passive television, are analogous art with respect to each other and the present invention, a high-luminance window for a computer display.

The Appellant has attempted to highlight the issues in a manner that is convenient for the Board of Appeals and Interferences. However, the Appellant respectfully requests the

Board of Appeals and Interferences to consider all of the Appellant's arguments, including any sub-issues that may not have been explicitly delineated above.

Claim Groupings

Claims 26 and 27 stand and fall together, claims 28-33 stand and fall together, claims 36 and 43 stand and fall together, claims 38-40 stand and fall together, and claims 41 and 44 stand and fall together. The rest of the claims deserve separate consideration.

Below the Appellant is providing a chart of the claims pending, categorizing the claims according to the references over which they were rejected and claim type for the convenience of the Board of Appeals and Interferences.

	System	Method	Computer Readable Memory	Means plus Function
McLaughlin et al.	26	36	43	45
in view of Whitehead	27	37		
	28			
	29	38		
McLaughlin et al.	30			
in view of	31	39		
Whitehead further	32			
in view of Lagoni	33	40		
McLaughlin et al.	34	41	44	
in view of Whitehead	35	42		

In the above chart, claims sharing the same row have similar (but typically not identical) limitations, and claims sharing the same column are of the same type (i.e., system, method, computer readable medium or means plus function).

The claims can be divided into

Group I, claims 26, 27, 34-37 and 41-45, which contains

Group IA, claims 26, 27, 34 and 35, which contains

Group IA(1) claims 26 and 27,

Group IA(2) claim 34, and

Group IA(3) claim 35,

Group IB, claims 36, 37 and 41-44, which contains

Group IB(1), claims 36 and 43,

Group IB(2), claim 37,

Group IB(3), 41 and 44, and

Group IB(4), claim 42,

Group IC, claim 45; and

Group II, claims 28-33 and 38-40, which contains

Group IIA, claims 28-33; and

Group IIB claims 38-40.

Group I deserves separate consideration from Group II because of the different combination of references relied upon in the Examiner's rejection. Groups IA, IC, and IIA deserve separate consideration from Groups IB and IIB because Groups IB and IIB contain the added limitation that the window control signal contains a video data signal not present in Groups IA, IC and IIA. Group IC deserves separate consideration because of the "means for applying." Groups IA(2) and IB(3) deserve separate consideration from the rest of Groups IA and IB, respectively because claims 34, 41 and 44 require that window information inside the high-luminance window be distinct from that outside of it. Group IB(2) deserves

separate consideration from the rest of Group IB at least because claim 37 contains a video amplifier. Groups IA(3) and IB(4) deserve separate consideration from the rest of Groups IA and IB, respectively, because claims 35 and 42 contain the vertical and horizontal sync.

A summary of the claimed invention

Among the purposes of the invention is to address the particular problems apparently heretofore-not-recognized associated with displaying a video image, which is best viewed with a bright luminance, while simultaneously displaying text and graphic information, which is best viewed with a relatively dark luminance (page 2, line 12 through page 4 line 2).

Referring to FIG. 2, this is accomplished with a host computer 210 that runs an application program 228 using a processor 212 and a display 110 (page 10, lines 1-4). Referring to FIG. 3, processor 212 (FIG. 2) automatically generates a window control signal (control signals on line 316) in response to the application program 228 (FIG. 2, page 10 line 12 through page 11, line 6). The invention also includes a window generator 326 that receives the window control signal (control signals on line 316, page 11, lines 14-16) and generates a window information signal (using window pulse on line 330 which is carried within analog window signal on line 336), and a display control (amplifier and beam control 318, see also FIGs. 6 and 7) that is included in the display device (110) and receives a video signal 310 and the window information signal (window pulse on line 330). Display control (amplifier and beam control 318) processes the video signal 310 in response to the window information signal (window pulse 330) to provide or apply a processed video signal (via line 319) to a display 322 (this is the subject matter that relates to claims 26, 36, 43 and 45 and to part of claim 33) producing a high-luminance window (112, FIG. 1). The window control signal 316 includes a video signal for the image in the high luminance window (claims 36 and 43).

Display 322 is preferably a CRT (claims 27 and 37). Display device 110 preferably includes a High Voltage Power Supply (HVPS) 320 that provides a high voltage signal (via

line 324) to an anode of the CRT 322 (claims 28 and 38). Preferably, display device 110 has a limiter 332 (preferably an Automatic Beam Limiter (ABL)) coupled to the window generator 326 and the HVPS 320. The limiter 322 is for limiting the beam current supplied to CRT 322 by the HVPS 320 (claims 29and 38). Preferably, ABL 332 samples the current of the high voltage signal via line 334, which is used to automatically determine when to limit the high voltage signal 324 of the HVPS 320 (claims 30 and 38). Preferably, the ABL 332 provides an analog window signal 336 to the video amplifier 318 included in the display control device (claims 31and 39). Preferably, the ABL 332 controls the gain of the amplifier 318 determined by the analog window signal 336 (claims 32 and 40). The window control signal (on line 316) preferably includes the position and size information for the high-luminance window (112, FIG. 1, claims 33 and 40) and preferably includes different information from outside the information window (114, FIG. 1, claims 34 and 41) so that outside the window (in region 114, FIG. 1) graphic and text images can be displayed while displaying video images inside the window (112, FIG. 1). Horizontal and vertical sync signals are provided from the host computer on lines 312 and 314 (claims 35 and 42).

In practice the ABL 332 serves two purposes. The first is to increase the beam current within the high luminance window to be higher than in the rest of the display and the second is to limit the higher beam current within the high luminance window so that it does not get too high (see FIG. 4B and its description, for example).

Arguments

Whether claims 26, 27, 34-37, and 41-45 are obvious over McLaughlin et al. in view of Whitehead

The proposed combination does not meet all the claim limitations

McLaughlin et al.

The Examiner alleged that the only difference between McLaughlin et al. and the claimed invention is that (the middle of page 3)

> McLaughlin et al. does not disclose expressly how to process a video signal in response to said window information signal to generate high-luminance viewing window thereon.

The Appellant respectfully submits that the Examiner has understated the differences between the claimed invention and McLaughlin et al. McLaughlin et al. never explicitly address the problem of displaying a video picture being played on a computer that is displaying graphic or text images or discloses an application for running such a video as discussed in the background section of the Appellant's disclosure, which the claimed invention is trying to solve. Although the Examiner stated (the sentence bridging pages 2 and 3)

> McLaughlin et al. discloses a method and a system for generating a high-luminance viewing window ... (figure 1, abstract, column 4, lines 55-66),

and although FIG. 1 shows display device 16 within a system, the abstract states,

> A method and system for controlling a display. The system includes a processor programmed to control (and optionally also calibrate) a display in response to user selection of displayed virtual controls. Preferred embodiments of the system includes [sic] circuitry within the display device which operates under control of software in response to user-entered commands for adjustment of parameters of the display device. In preferred embodiments, the processor is programmed with software which stores multiple types of data (including display parameters measured during

calibration and user-specified adjustment data indicative of differences between first and second sets of display control parameters) in separate data files; executes a locking operation which disables mechanical controls on the display device, periodically and automatically polls the status of the display, and automatically corrects any display parameter whose value differs from a desired value; displays two-dimensional controls with horizontal and vertical segments which a user can drag to vary display parameters such as brightness, contrast, and picture size or position; displays controls enabling a user conveniently to select either a maximum displayed intensity value of one primary color or a linear combination of two primary colors; and achieves excellent color matching between displayed and printed images by setting the display's white point to a proofing level (by directly controlling display circuitry) and prompting the user to perform color matching with the display at the selected proofing white point. The invention also includes the methods performed by the described system.

In other words this passage essentially only discloses a system that controls a display and includes a program that causes circuitry to control the characteristics of the display such as the color, shape, and size. Similarly, column 4, lines 55-66 state

> With reference to FIG. 1, a preferred embodiment of the invention includes programmed processor 11, main memory 12 (a random access memory), data storage device 13, and interface 17, all connected along a system bus 14, and mouse (or other input device) 18 and computer keyboard 10 connected to interface 17.
>
> Expansion bus 15 is connected to system bus 14, and digital video board 20 and computer display device 16 having display screen 16A) [sic] are connected along expansion bus 15. Processor 11 runs the operating system and applications software that controls the operation of digital video board 20 (and the other system components).

In other words this passages discusses among other things a system that runs software for controlling a digital video board. *However, the Appellant respectfully submits that these passages and FIG. 1 never mention, show or imply the presence of the claimed high-luminance window or window control signal, contrary to the allegations of the Examiner.*

The Examiner continued (page 3, starting at the end of line 3)

> said computer display device comprises ... window generator device 16C ... and a display control device 16D for controlling ... the main window and said high-luminance viewing window, ... and both are displayed on a CRT display screen in response to window information signal from manual controls 16B or from said

window generator device processor (figures 1, 5, 8, 11, abstract, column 5, lines 10-28 and lines 52-66, column 14, lines 36-42, and column 15, lines 13-22).

In other words, the Examiner alleged that 16C is a "window control device" and 16D is a "display control device," which together constitute at best two of the components of claim 26, for example. The Appellant respectfully submits that the above discussion does not explain which component of McLaughlin et al. the Examiner believed includes, corresponds to, or constitutes the "means for applying a processed video to a computer display screen to generate said high-luminance window" of claim 45. Further, independent claim 26 recites (1) a processor, (2) a window generator and (3) a display control device, which constitute three separate elements. Similarly, independent claim 45 recites a means of generating a window control signal, a means of generating a window information signal, and a means of processing. In addition to the method steps of independent claims 36 and 43 that correspond to the functions of these elements of independent claims 26 and 45, claims 36 and 43 and also include the limitation that the window control signal includes a video signal, which the Examiner has not clearly shown. Thus, following the Examiner's line of reasoning (which discusses just two items) McLaughlin et al. appear to be missing at least one of the (three) claimed elements of independent claim 26 and at least two of the claimed elements/steps of independent claims 36, 43 and 45. Clarification is respectfully requested. Additionally, the Appellant respectfully submits that the Examiner has not shown where McLaughlin et al. disclose the video amplifier of claim 37. The Appellant also respectfully submits that the Examiner has not shown where McLaughlin et al. disclose the horizontal and vertical synchronization signals of claims 35 and 42. Clarification is respectfully requested.

The Appellant discloses a separate unit that handles the windows, window generator 326. The element is referred to directly in independent claim 26 and referred to via the step

of generating a window information signal based on the window control signal. The Examiner has not shown any element of McLaughlin et al. that clearly corresponds to the window generator 326 by receiving a window control signal and using it to generate a window information signal, as claimed.

It is not clear why the Examiner cited FIGs. 5 and 8. They relate to control panels used to change the characteristics of the displayed image. Fig. 5 shows a control panel displayed in response to selecting brightness contrast control 43. The user can choose between dragging crosshair tool 78 or bars 77 and 79 and clicking on arrows 71-74 to adjust the current contrast and/or brightness of display 16 while also giving their numerical values in boxes 70 and 75, respectively. Likewise, FIG. 8 is displayed in response to clicking on icon 46 for controlling the position of the image on screen 16 in which the user can choose between crosshair 96, bars 97 and 98 and arrows 101-104 to adjust the horizontal and vertical position of the picture. FIGs. 5 and 8 do not show a high-luminance window, generating a window control signal, generating a window information signal, generating a window information signal, a window generator, a display control device, or a processor.

The claimed window generator receives window control information from the processor. The Examiner has not shown how McLaughlin et al.'s processor 16C (which the Examiner alleged is a "window generator device") receives window control information from a processor. The claimed processor generates the window control signal based on an application program. It is not clear which element of McLaughlin et al. the Examiner believed is generating a window control signal based on an application program it is running and then sending that signal to McLaughlin et al.'s processor 16C (which the Examiner associated with the "window generator device").

Independent claims 26, 36, 43, and 45 refer to generating a window control signal, which is used to generate a window information signal, which in turn is processed in order to produce the high-luminance window. While the passages referred to by the Examiner use the phrase "control signal," McLaughlin et al. never clearly disclose a separate window control signal and window information signal. The phrases "window information" and "information signal" are absent from McLaughlin et al.

Discussing each of the passages cited by the Examiner in the order they occur, column 5, lines10-28 state

> Display 16 preferably includes programmed processor 16C, manual controls 16B (e.g., manually operated buttons and switches), control circuitry 16D, and display screen 16A (typically a three-gun CRT display screen for displaying color images). Circuitry 16D adjusts the electron guns (and electron beam aiming electromagnets) within display screen 16A to control the characteristics (including geometric and color parameters) of the image displayed on screen 16A, in response to signals from manual controls 16B or from processor 16C (which relays control signals communicated to it from processor 11 via bi-directional communication link 16E). The latter signals (from processor 16C) are typically generated in response to user commands entered using keyboard 10 or mouse 18 in response to virtual controls displayed in accordance with the invention. The processor 16C also communicates status and configuration information to software running on processor 11 via bi-directional communication link 16E.

In other words, this passage explains that processor 16C (the Examiner's alleged window generator device) "relays" signals as opposed to using the window control signals to generate window information signals, and mentions that "signals (from processor 16C) are typically generated in response to user commands entered using keyboard 10 or mouse 18," rather than being produced in response to window control signals from a processor running an application program. Additionally, this passage never clearly identifies processor 16C as a window generator or as having its function. Although there may be some ambiguity with regard to processor 16C and the signals it receives, processes and sends, the burden of proof

is upon the Examiner to show the claimed invention to be unpatentable and therefore to show that these ambiguities are resolved in favor of obviousness. It logically follows that in the absence of such a showing (as in the present case) any such ambiguities should be resolved in favor of unobviousness.

Further, the Appellant respectfully submits that the Examiner's assertions in the last full paragraph of page 7, about control circuit 16D receiving both a video signal and a window information signal, are unsupported. Although control circuit 16D is described as being controlled by processor 16C in FIG. 1 (cited by the Examiner), there is no description of control circuit 16D receiving both a "video signal" and a "window information signal," as recited in independent claims 26, 36, 43, and 45.

Column 5, lines 52-66 (cited above by the Examiner) states

> Appropriately programmed processor 11 performs all necessary digital processing operations (described below) on video (or other image data) received from memory 12 or 13 (and optionally also on data from colorimeter 19), controls the writing of image data to digital video board 20, and generates control signals for digital video board 20 (and processor 16C and/or circuitry 16D of display device 16). Board 20 drives display device 16, to cause image and/or text data to be displayed in windows on screen 16A (where the data has been transferred to bus 15 from system bus 14 under control of processor 11). Preferably, board 20 is capable of processing 24-bit color video data for display on device 16, and processor 11 has 32-bit addressing capability.
>
> Main memory 12 stores the program and data sets for processor 11, and preferably has at least an eight megabyte capacity.

Although this passage mentions sending "control signals" to processor 16C and/or circuitry 16D, it is not clear if these are "window control signals," as recited in independent claims 26, 36, 43, and 45. Further, column 5, lines 52-66 do not disclose how processor 16C or circuitry 16D respond to this control signal, and therefore do not disclose processor 16C generating a "window information signal" or circuitry 16D processing a window information signal, as recited in independent claims 26, 36, 43, and 45. There is no discussion of

processor 16C being in any way dedicated to generating windows or being a "window generator."

Presumably, the Examiner cited column 15, lines 13-22 and FIG. 11 regarding the requirement of claims 34, 41, and 44 that the high luminance windows display information distinct from other windows and cited column 14, lines 36-42 regarding its discussion of processor 16C and circuit 16D. Regarding FIG. 11 the Appellant notes that the presence of a window or window-like image on a computer screen does not necessarily imply the use of a window generator or a window control signal any more than the presence of a picture of a bicycle on a screen implies the presence of a special bicycle generator or a bicycle control signal. Although there are two boxes containing images, one labeled 300 and the other unlabeled, there is no clear indication that the images in the two boxes are different.

The only discussion of FIG. 11 is in regard to step 210 of FIG. 10. Therefore, FIG. 11 is best understood in the context of the method of FIG. 10, which shows a calibration method initiated in response to clicking on icon 34. In steps 200-208, first calibrator 19 measures a series of different display parameters on a series of images and then the display is automatically calibrated to an initial calibration. Column 14, lines 36-42 (cited by the Examiner) discuss step 206 of the method of FIG. 10, and state

> In step 206, processor 11 (and/or processor 16C) sends control signals via communication link 16E to display control circuitry 16D in device 16 to cause the display control circuitry to change the "current" display parameters (described in the previous paragraph) to match the "desired" display parameters (also described in the previous paragraph).

This paragraph refers to "display parameters" described in the "previous paragraph," which is column 14, lines 15-35, which also refers to "display parameters," without ever mentioning the word "window" and therefore does not refer to "window control signals" being received

by processor 16C or "window information signals" being generated by processor 16C (which is required for processor 16C to constitute the claimed window generator) or being processed by circuitry 16D (which is required for circuitry 16D to constitute the claimed display control device).

Returning to the method of FIG. 10, in step 208 Color Management Software (CMS) is used to convert from the color space of the monitor (RGB) to that of a peripheral such a printer (CMYK) so that the image of the printer or other peripheral looks identical to that of the image displayed on the monitor. Then in step 210 the user fine-tunes the display by manually making visual comparisons between the image shown in window 300 (FIG. 11) and the printed image 302 (FIG. 11) and manually clicking on the appropriate icons (of FIGs. 2-9) to change the image in appearance (column 15, lines 1-5). Step 210 is apparently done with the printed image in a special box having controlled lighting conditions or a "proofing environment" referred to as a "light box" (also referenced in FIG. 11 by printed image box 302), so that the ambient lighting conditions do not adversely affect the calibration (column 15, lines 9-15). McLaughlin et al.'s description of the method of FIG. 10 never clearly states or indicates that box 300 and the unlabeled box of FIG. 11 have different pictures. Considering that the purpose of box 300 is apparently for comparing its image to a printed image, it would seem reasonable that the only difference between the image of box 300 and that of the background is that the image in box 300 is supposed to look identical to the one printed, contrary to the Examiner's assertions. Thus the Examiner has not shown where McLaughlin et al. discloses two windows displaying distinct information as in claims 34, 41, and 44. Although the Examiner apparently cited column 15, lines 13-22 because of the

discussion of window 300 of FIG. 11, the Appellant notes that processor 16C and circuitry 16D are also not discussed there.

Thus the Appellant respectfully submits that the Examiner has not clearly shown how the passages he cited support his allegations that (1) processor 16C receives a window control signal, (2) processor 16C generates a window information signal, (3) processor 16C behaves as a window generator in any other way, or (4) circuitry 16D processes window information received from a window control signal. Likewise, the Appellant respectfully fails to see where any of these passages have a clear teaching of generating a window information signal in response to a window control signal and processing the window control signal or of generating a high-luminance window or that the information in the alleged high luminance window is distinct from the background.

The Examiner alleged that McLaughlin et al. disclose a "main window and said high luminance viewing window" (page 3, lines 6 and 7). Although McLaughlin et al. may show more than one window, the Examiner has not shown why one of the windows constitutes a "high-luminance" window. Presumably the luminance of window 300 is set so that it looks identical to a printed hard copy, which is typically not a high luminance.

Whitehead

The Examiner stated (the bottom of page 4),

> Whitehead discloses...a window generator 38 (comprising 56, 58 and 60), for receiving a window control signal...said received video signal responsive to said window information signal to generate said high-luminance window....(figures 2 and 4, column 6, lines 18-63 and column 4, lines 22-37).

However, feature 38 is a "highlight selector" and not a "window generator." Additionally, the X-ray and ultrasound scans of Whitehead are still graphic images rather than the video

images discussed in the background of the Appellant's disclosure. Thus, Whitehead is also not attempting to solve the problem discussed in the Appellant's disclosure of running an application for displaying a video picture being played on a computer that is displaying graphic or text images in the background, which the claimed invention is trying to solve. Further, the Appellant respectfully submits that contrary to the Examiner's assertions about "two distinct informations" (page 4, lines 2-5), Whitehead highlights a portion of a larger image rather than creating a separate window with its own "distinct" image, as required by claims 34, 41, and 44.

Combinability

> The Examiner stated (page 4, second full paragraph of the Office Action),
>
> it would have been obvious to one of ordinary skill in this art to utilize teachings of Whitehead to explain clearly the functions of said window generator device and said control display device of McLaughlin et al.

However, as shown above, it is not clear if McLaughlin et al. even have a window generator device to "explain." McLaughlin et al. has two processors; processor 11 feeds into processor 16C. In contrast, Whitehead shows only one processor 54. McLaughlin et al. lack an element corresponding to MUX 62. Yet, it seems that McLaughlin et al. would need some sort of device for receiving both the signal from the highlight select and the image memory, were Whitehead merely giving details of McLaughlin et al.'s alleged widow generator and display control device, which allegedly receives a video signal and a window information signal for processing. Consequently, the Appellant respectfully fails to see which elements of Whitehead "explain" which elements of McLaughlin et al.

Nonanalogy of McLaughlin et al. and Whitehead and teachings discouraging the combination

The Examiner alleged (the first full paragraph of page 4) that

> McLaughlin et al. and Whitehead are analogous art because they are from the same field of endeavor, that is the computer art.

However, the set of subclasses of the field of search, the U.S. classification, and the International classifications of Whitehead and McLaughlin et al. do not have any overlap, and the

> Patent Office classification of references and the cross-references in the official search notes are some evidence of 'nonanalogy' or 'analogy'(MPEP 2141.01(a) the top of the second paragraph of the left column of p. 2100-92, which cites *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973))

implying that Whitehead and McLaughlin et al. may not be from the same field of endeavor. In considering the combinability of two references each reference must taken be taken as a whole (MPEP p. 2100-95, the first sentence of the last paragraph of the right column, which cites *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)) including the stated purposes of those references. The stated purposes of the device of McLaughlin et al. are to provide a computer implemented apparatus for controlling or calibrating the characteristics of a display using virtual controls (column 1, lines 9-15) in a convenient and intuitive manner rather than just simulating mechanical controls (column 2, lines 55-59) in a manner that is language independent (column 4, lines 6-10) and to provide a locking mechanism (column 2, line 60 through column 3, line 2). McLaughlin et al. is concerned with the storage and retrieval of multiple display settings that can be shared among multiple users (column 16, lines 8-54). Another purpose of the device of McLaughlin et al. is to provide a means for matching the

colors displayed on the screen with those printed (column 3, line 65 through column 4 line 5). The device of McLaughlin et al. directly sets the white point by directly controlling the display circuitry rather than by first performing a compression that may alter the color tables in the graphics board with the display preset at a non-proofing white point. The undesirable presetting of the display at a non-proofing white point and then simulating a proofing white point can clip as much as half the blue range the display is otherwise capable of showing (column 15, lines 46-67).

In contrast, the purposes of Whitehead's device are to provide a grayscale highlighting system (see the title). Whitehead characterizes his invention by

> FIG. 2, which shows the overall system of this invention, an ultrasonic or x-ray scan is produced by an appropriate scanning device 22 (column 3, lines 41-43).

In other words Whitehead's system is for ultrasonic or X-ray scanning, which are primarily for medical or diagnostic uses (see also the abstract lines 2 and 13; column 1, lines 6-9, and 17-50; column 3, line 66 though column 4, line 3; column 5, line 42; and column 6, lines 4 and 9, for example). Whitehead's system can highlight one portion of the image by assigning the 256 available gray scale levels available on the CRT or monitor to a relatively small number of shading information levels of the original X-ray or other medical photograph while still being able to view the rest of the image in which the 256 gray scale levels are assigned to a significantly larger number of information levels, thereby giving the highlighted area a greater contrast than the rest of the image (cf. column 1, lines 6-35 and see column 2, lines 6-12 and 46-54). In other words, the background region is assigned a wide dynamic range while the highlighted region is assigned a narrow dynamic range. For example, a medical X-ray image may contains 2048 information levels related to the shading to which the 256 gray scale levels of the monitor are assigned, while in the highlighted area

the 256 gray scale levels may be assigned to just 256 of the information levels of the original X-ray. Whitehead is trying to avoid the prior necessity of mentally piecing together many different images in order to get an accurate view of all 2,048 information levels used to cover the densities ranging from "air to bone" (column1, lines 42-46). Whitehead also ensures that that there are more information levels than gray scale levels by setting the minimum display level to 50 to avoid artifacts due to grayscale contouring or round-off errors. Whitehead provides a special high-brightness CRT to provide a wider dynamic range and enhance the usefulness of his system (column 2, lines 7, 8 and 55-60).

Although Whitehead's ability to highlight a portion of an X-ray could be very important for diagnosing medical problems, it is completely unnecessary when using McLaughlin et al.'s system to improve the overall match between an image on a screen and a printed image. McLaughlin et al.'s "window" of FIG. 11 relates to converting between color spaces, a concept specific to forwarding a picture to a peripheral device of a computer; Whitehead relates to highlighting a portion of a medical image so as to be able to see the entire picture and details simultaneously to enable diagnosis of patient, a concept specific to the medical field; and the Appellant's system relates to windows for running video pictures (rather than the still graphic images of McLaughlin et al. and Whitehead), which is a concept specific to a computer and possibly the Internet, not addressed by Whitehead and McLaughlin et al.

Differences in "function" (*In re Ellis*), especially antithetical or mutually exclusive modes of operation or functioning, have been found to be indicative of different fields of endeavor or nonanalogous art such as compact and modular versus varying size memories in *Wang Laboratories Inc v. Toshiba Corporation* 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir.

1993), cited in MPEP 2141.01(a), p. 2100-93, the paragraph bridging columns 1 and 2, and extraction versus storage as emphasized by MPEP 2141.01(a) (at the bottom of the left column of p. 2100-92 citing *In re Clay*, 966 F.2d 656, 23 USPQ2d 1058(Fed. Cir. 1992)). For example, highlighting only a portion of the image as in Whitehead tends to distort an image to better see certain parts of the images and is antithetical with respect to calibrating or adjusting the colors to obtain the most accurate color matches. Displaying and changing the color parameters of an entire test image or screen in McLaughlin et al. is antithetical to highlighting only a portion of the screen. The preference for a special high-brightness CRT would deter the combination of Whitehead's specialized system with that of McLaughlin et al., which is intended for calibrating a display for ordinary use. McLaughlin et al. target users limited in their language capabilities and therefore use "intuitive" (column 2, line 58) icons with " 'universal' and language independent" (column 13, line 27) meaning, while Whitehead is targeting highly educated medical professionals. McLaughlin et al.'s locking mechanism is quite useful in the context of setting screen parameters, because once the display is tuned it is undesirable to allow unauthorized tampering. However, a locking mechanism in the context of a highlighting mechanism is undesirable because which areas are to be highlighted changes with each image. The only examples of a medical picture given by Whitehead are X-rays and ultrasonic scans, which are black and white or grayscale images. Thus Whitehead is concerned with grayscales of essentially black and white images, unlike McLaughlin et al. and the Appellant's disclosed invention, which are typically color displays. The *color* setting features of McLaughlin et al. are not very relevant to the *grayscale* highlighting of Whitehead, thereby mitigating against the combination. In McLaughlin et al. the user is presumably viewing the identical still picture twice, for

converting between color spaces, and in Whitehead the user is viewing different parts of the same picture simultaneously. The Appellant respectfully submits that contrary to the Examiner's assertions, McLaughlin et al.'s system for calibrating an entire display screen using a window containing a duplicate image of the entire screen for color space conversion, is no more analogous to the Appellant's high-luminance window system for a computer system, or to Whitehead's system for highlighting a portion of the screen showing an X-ray, for example, than the two types of computer memory, the compact modular memories of a single size are to memory circuits of varying sizes of *Wang Laboratories Inc v. Toshiba Corporation*, which were determined to be nonalaolgous art despite both being computer memories. The differences in the purposes or "function" (*In re Ellis*) of the Whitehead and the McLaughlin et al. references means that the inventor would have less motivation or occasion to consider it in addition to indicating that they belong to different fields of endeavor. Thus the very different purposes or functions of Whitehead and McLaughlin et al., in addition to being indicative of being in different fields of endeavor, teach away from the combination proposed by the Examiner.

Lack of an art-recognized motivation

The Examiner alleged that the motivation for combining McLaughlin et al. and Whitehead was

> to allow the operator adjusting the brightness and/or contrast of the selected highlight area and/or the background image *independently* ...by...an application program run by a separate host computer (emphasis added).

The Appellants respectfully submit that contrary to the implications of the Examiner's assertions, neither Whitehead nor McLaughlin et al. disclose an application running the sort

of video images contemplated by the disclosed invention. Although the Examiner was apparently attempting to establish a "motivation [for the proposed combination]... in the references themselves" (MPEP 2143.01, p. 2100-98, the third paragraph in the left column, which cites *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)), the above "motivation" is not fully supported by Whitehead. The stated emphasis taught by Whitehead is on highlighting parts of an image not on *independent* control. In other words, Whitehead has no teaching or clear suggestion regarding the general desirability of independent control of display characteristics that is divorced from his teachings about the desirability of highlighting parts of a medical image. Whitehead has no teaching regarding most of the display characteristics McLaughlin et al control (e.g., white point, gamma, and edge distortion). Thus, although highlighting part of a medical image may be a stated objective of Whitehead, "adjusting the brightness and/or contrast of the selected highlight area and/or the background image *independently*"(emphasis added) is not. Conversely, although Whitehead highlights a selected area of an image to see more detail in that region, and may be interested in the highlighted region and background region simultaneously, McLaughlin et al. is not. The test image 300 is matched against a printed image to get the color conversion correct from the screen to a peripheral such as a printer (e.g. RGB to CMYK, see column 14, lines 53-63, for example). Since window 300 is presumably the entire image, not just a highlight of a portion of the image, in contrast to the "window" of Whitehead, therefore even were McLaughlin et al.'s window 300 adjusted separately from the unlabeled window, it would makes no sense (or at least the Examiner has provided no motivation) to use Whitehead's independent adjustment of a highlighted region and a background region to replace McLaughlin et al.'s separate calibration of the image on

the screen 16A (taught in connection with FIG. 10) and calibration of the color space conversion in window 300, when McLaughlin et al.'s circuit including processors 11 and 16C would have been designed for the job, and Whitehead's highlight circuit is not. Considering that a close reading of McLaughlin et al. reveals no clear disclosure of whether it is possible to adjust window 300 separately and neither Whitehead nor McLaughlin et al. disclose a motivation for why one would want to be able to control the coloring of window 300 separately from the rest of the display, the Examiner has not shown that a motivation for wanting to be able to separately adjust the colors of window 300 and the rest of the display was recognized in the art.

The combination runs counter to the teachings of McLaughlin et al.

Regarding the Examiner's assertions in the paragraph bridging pages 7 and 8, it is not clear whether making window 300 of McLaughlin et al. a high-luminance window is even desirable because the brightness level is part of the conversion between color spaces taught by McLaughlin et al. Thus increasing the luminance of window 300 automatically without following the color conversion prescribed by the user's calibration would produce a print that is darker than window 300 indicates, misleading the user, and thereby degrading or destroying the intended operation of McLaughlin et al. (cf.. MPEP 2143.02, p. 2100-99, the section titled, "THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE" which cites *In re Gordon* 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Whether claims 28-33 and 38-40 are obvious over *McLaughlin et al. in view of Whitehead and further in view of Lagoni*

The proposed combination does not meet all of the claimed limitations

In the last sentence of the second paragraph of page 6 of the Office action, the Examiner referred to the Picture-In-a-Picture (PIP) processing section 5 of Lagoni as a "window generator device" thereby associating it with the Appellant's claimed window generator, and alleged that it generates a "window information signal." However, the picture-in-a-picture processing section 5 receives rather than generates the AVC signal and the MVC signal and

> selects one of the MVC or ACT [sic] signals coupled to its inputs for the big picture and the other signal for the small picture (column 3, lines 34-39)

without significantly modifying the MVC or AVC signal. In other words, the PIP processing section 5 just selects which signal is used for the big picture and which is used for the small picture, rather than "generating a window information signal in response to a window control signal," as essentially recited in independent claims 26, 36, 43, and 45, thereby not meeting all the claim limitations in addition to teaching away from the proposed combination and evidencing nonanalogy of Lagoni.

Combinability

The Examiner alleged (at the top of page 7 of the Office Action) that Lagoni "explains" the gain control 70 of Whitehead. The Appellant respectfully requests clarification as to which components of Lagoni the Examiner believes constitute the gain control of the claims, because a BCL just limits current, and it is not clear why Lagoni needs a gain control in addition to the brightness control, in contrast to Whitehead, for example. Whitehead's gain control has only one input and one output, while Lagoni's BCL, as well as

Lagoni's combined BCL and brightness control section, appears to have multiple inputs and/or outputs. Consequently, the Appellant respectfully submits that he does not see how Lagoni can "explain" the gain control 70 of Whitehead.

The Appellant notes that in the combination proposed by the Examiner a part of the device of Lagoni (the tertiary reference) is used to modify the device of Whitehead (a secondary reference) and only a part of the so-modified device of Whitehead is in turn used to modify McLaughlin et al. (the primary reference). To envision a modification to a device (the device of the secondary reference modified by a part of the device of the tertiary reference) and all the possible benefits this yet-to-be-built-modified-device with enough clarity to realize that another device (that of the primary reference) could be improved by modifying it with only one of the parts of this yet-to-be-built-modified-device requires an added level of foresight. This requires greater foresight than were both Whitehead and Lagoni being used to modify separate parts of McLaughlin et al., for example. The game of chess illustrates some aspects of the role of foresight in non-obviousness. At any point in any game finding all the possible moves that a first player's piece can make is simply a matter of noting every direction and every place along that direction to which that piece can be legally moved. This is just a straight-forward application of the rules of movement and capture applicable to the piece in question, and could therefore be considered obvious. Repeating this simple algorithm for all the pieces of the first player, any possible move the first player can make can be found. For any of the first player's possible moves, all of the counter moves of a second player can also be found following the same simple algorithm. By checking all possible moves for the first player and all possible counter moves of the second player one can find which of the first player's possible moves will result in the best

outcome at the end of the second player's turn (the end of a first round). This process can be extended to take into account the all the possible moves of the next round to determine the first player's first round move with the best possible outcome at the end of the second round. In fact, repeated repetition of the same simple algorithm can yield the best possible next move for the first player taking into account all possible game scenarios to their completion. However, because of the tremendous foresight involved in finding the move with the best outcome, finding the best move is still not obvious. (Human beings are not even capable of carrying out this algorithm in their heads beyond a relatively small number of rounds, and typically rely on intuition, experience, memorized game patterns, rules of thumb (e.g. avoid moves that loose momentum) and other means.) Thus the more foresight that would have been required to make a modification, the less obvious that modification. The foresight required for envisioning all possible consequences of all possible modifications of a prior art device can be greater than the foresight required in chess because, unlike chess, no set rules exist for determining all possible consequences of a modification. Thus, the added foresight in using only the modified part of the yet-to-be-built-modified-device of Whitehead to modify the device of McLaughlin et al. at least mitigates against a conclusion of obviousness.

Hindsight

The Examiner stated (the second paragraph of page 7 of the Office Action),

> The suggestion for doing so would have been to obtain a system for generating high-luminance viewing window, which is not isolated from the influence of the main picture but rather has a specific relationship in that the sub-window has a higher luminance.

The Appellant respectfully submits that this "motivation" comes from the claimed invention. Absent the teaching of the claimed invention, this appears to be a statement of the resultant

combination, as understood by the Examiner, rather than a statement of the motivation. To show a motivation the Examiner needs to show where in the references the motivation is taught or suggested, which the Examiner did not show in this statement (cf. MPEP 2143.01, which cites *In re Rouffet* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998)). If the only teaching of such a reason for making the combination comes from the Appellant's specification, it is by definition hindsight. Further, the above statement does not give a reason why the high-luminance window is desirable or why one of ordinary skill in the art would have recognized it to be desirable within the invention of McLaughlin et al.

Nonanalogy of Lagoni and teachings discouraging the combination

Regarding the Examiner's allegations (the last paragraph of page 6 of the Office Action) about McLaughlin et al., Whitehead and Lagoni all being in related fields of endeavor, the set of subclasses listed in the field of search, the U.S. classification, and the International classification of Lagoni does not have any overlap with that of Whitehead or McLaughlin et al., suggesting that they are from different art areas. Lagoni only mentions applying his BCL to a monitor without a receiver as an afterthought and is at least primarily concerned with problems that relate to televisions rather than computers. Lagoni never mentions the word "computer" or the Internet in his specification and never discusses using his device (with or without a receiver) with text or graphic images. Lagoni relates primarily to a picture-in-a-picture and as an afterthought mentions a "picture-out-of-a-picture"; both concepts are at least primarily associated with viewing multiple channels on a passive television receiver. In contrast, McLaughlin et al.'s test "window" of FIG. 11 relates to converting between color spaces, a concept specific to forwarding a picture to a peripheral

device of a computer such as a printer, Whitehead relates to highlighting a portion of a picture so as to be able to see the entire picture and the highlighted details simultaneously to enable diagnosis of patient, a concept specific to the medical field, and the Appellant's system relates to windows, which is a concept specific to a computer.

Similar to the "extraction" versus "storage" in *In re Clay*, Lagoni has antithetical or mutually exclusive "functions" or modes of operation when compared to the Appellant's invention, the device of Mclaughlin et al., and Whitehead in that watching television tends to be a passive activity while using a computer, calibrating the colors of a monitor, or diagnosing and highlighting portions of an X-ray tend to be much more active activities (see *In re Ellis* regarding differences in structure and "function" and nonanalogous art). The high-luminance window of the Appellant's invention, the highlighted window of Whitehead, and the test image of McLaughlin et al. are typically of central interest to the viewer and the respective backgrounds of each are of secondary interest to the viewer. In contrast typically the smaller picture, which the Examiner presumably would like to view as a window, of the PIP system is referred to as the "auxiliary or small picture" (column 3, line 24) and is typically of only secondary interest while the larger background picture is referred to as "a main or big picture" (column 3, line 24) and is typically of primary interest. PIP systems typically have only limited control of the size, for example many just allow two sizes, because when the user's interest in the small picture increases the user typically simultaneously switches the big picture to small and the small picture to big rather than changing the size of the small image. In contrast in the highlighting system of Whitehead has extensive control over the percentage of the image highlighted. Although the percentage of the image highlighted in Whitehead is changed, the size of the image typically is not, in

contrast to Lagoni. Also, in windows on a computer such as that of the Appellant the user typically has extensive control of over the size of the window so that many windows can be cascaded, viewed simultaneously, or arranged in other ways according to the convenience of the user who typically has multiple windows open, several of which may be of equal or nearly equal interest. Windows on a computer system typically allow the transfer of information from one window to another, which is not allowed in the system of Lagoni (or Whitehead). As Lagoni's invention is primarily a television, it only receives or is otherwise conveyed signals for pictures but is not capable of actually *generating* them, in contrast to a computer that runs applications and is at least capable of generating pictures. In Lagoni the user is viewing two unrelated series of moving video pictures while in McLaughlin et al. the user is viewing presumably the identical still picture twice, for converting between color spaces, and in Whitehead the user is viewing different parts of the same picture simultaneously. The Appellant respectfully submits that contrary to the Examiner's assertions, Lagoni's picture-in-a-picture for passive viewing of two television channels is also no more analogous to the Appellant's high-luminance window system for a computer system, McLaughlin et al.'s system for calibrating an entire display screen using a window containing a duplicate image of the entire screen for color space conversion, or Whitehead's system for highlighting a portion of the screen showing an X-ray, for example, than compact modular memories of a single size are to memory circuits of varying sizes of *Wang Laboratories Inc v. Toshiba Corporation*, cited in MPEP 2141.01. In addition to evidencing less "opportunity" to consider Lagoni and that Lagoni is non-analogous art, the differences between Lagoni and the other references and their respective fields of endeavor provide less

motivation to consider Lagoni, according to *In re Clay*, thereby teach away from making the combination proposed by the Examiner.

Further, the combinability of Whitehead and Lagoni is important because the Examiner effectively suggested modifying Whitehead with Lagoni and then using the modified Whitehead to modify McLaughlin et al. However, the Appellant respectfully submits that compression of the small image and switching the background with the foreground in Lagoni's PIP system, does not make sense when the small window or foreground is nothing more than a highlighted, but otherwise unaltered, portion of the background image, as in Whitehead.

As pointed out above with regard to Whitehead, to make window 300 of McLaughlin et al. bright, according to Lagoni, could ruin the color conversion setup by the user, and would therefore not be obvious (cf. MPEP 2143.02, p. 2100-99, which cites *In re Gordon* 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) regarding not making combinations that destroy the operation of the reference).

Summary and Conclusions

The Appellant respectfully submits that the Examiner has not clearly shown where McLaughlin et al. disclose that (1) processor 16C receives a window control signal, (2) processor 16C generates a window information signal, (3) processor 16C behaves as a window generator in any other way, or (4) circuitry 16D processes window information received from a window control signal. Likewise, the Appellant respectfully fails to see where any of these passages have a clear teaching of generating a window information signal

in response to a window control signal and processing the window control signal or of generating a high-luminance window.

It is not clear if Whitehead discloses the claimed window generator. The highlighted portion of Whitehead are related to the background as different parts of the same image rather than being distinct images as claimed.

The components of Whitehead do not have a close enough correspondence to support the Examiner's allegation that Whitehead "explains" details of McLaughlin et al.

The components of Lagoni do not have a close enough correspondence to support the Examiner's allegation that Lagoni "explains" details of Whitehead.

The Examiner has not shown that the alleged motivation for combining McLaughlin et al. and Whitehead of separately controlling the brightness and contrast was recognized in the art of McLaughlin et al. The alleged teaching of separate control of brightness and contrast of Whitehead is never separately taught as being a feature of general usefulness, or as a feature with usefulness other than in the context of highlighting medical mages.

The three devices of Lagoni, Whitehead and McLaughlin et al. and the fields associated with them, when compared to one another, have many characteristics that are of no interest, antithetical, or mutually exclusive, further evidencing that they are from different fields of endeavor and teach away from the proposed combination. Consequently, although the diagnostic grayscale highlighting system of Whitehead and color adjustment and calibration system of McLaughlin et al. both mention computers and displays and the picture-in-a-picture system of Lagoni mentions a television, they are no more from the same field of endeavor than the two computer memories discussed in *Wang Laboratories Inc v. Toshiba Corporation* that were found to be from nonanlogous fields of endeavor.

Making the test "window" of McLaughlin et al. a brighter high-luminance window would hamper the operations of McLaughlin et al. because it would no longer be a true representation of the image that the printer will produce.

Therefore the claims on appeal are allowable and the Appellant requests that the rejection of claims 26-45 be reversed, so that this case can be allowed and passed to issue.

Respectfully Submitted,

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Appendix

The claims on appeal are:

26. A system for generating a high-luminance viewing window on a computer display device, comprising:

a host computer system for running an application program;

a processor device for automatically generating a window control signal in response to said application program;

a window generator device, for receiving said window control signal, and for generating a window information signal; and

a display control device included in said computer display device for receiving a video signal and said window information signal, for processing said video signal in response to said window information signal and for providing a processed video signal to a computer display screen to generate said high-luminance viewing window thereon.

27. The system of Claim 26 wherein said computer display device includes a cathode ray tube (CRT) device.

28. The system of Claim 27 wherein said computer display device includes a high-voltage power supply (HVPS) for providing a high-voltage signal to an anode of said CRT device.

29. The system of Claim 28 wherein said computer display device includes a limiter device coupled to said window generator device and to said HVPS, said limiter device for limiting beam current supplied to said CRT device by said HVPS.

30. The system of Claim 29 wherein said limiter device is an automatic beam limiter (ABL) for sampling the current of said high-voltage signal to automatically determine when to limit said signal.

31. The system of Claim 30 wherein said ABL provides an analog window signal to said video amplifier.

32. The system of Claim 31 wherein said ABL provides said analog window signal to control a gain control of said video amplifier.

33. The system of Claim 29 wherein said display control device is a video amplifier and said window control signal includes position and size information for said high-luminance viewing window.

34. The system of Claim 26 wherein information within said high-luminance viewing window is different from information outside said window.

35. The system of Claim 26 wherein said host computer provides a horizontal synchronization (H Sync) signal and vertical synchronization (V Sync) signal.

36. A method for generating a high-luminance viewing window on a computer display device, comprising:

running an application program on a host computer;

generating a window control signal in response to said application program;

generating a window information signal in response to said window control signal;

using a display control device for receiving a video signal and said window information signal, for processing said video signal in response to said window information signal, and for providing a processed video signal to a computer display screen to generate said high-luminance viewing window thereon; and

providing said processed window information signal to said computer display device for generating said high-luminance viewing window thereon.

37. The method of Claim 36 comprising:

providing a cathode ray tube (CRT) device and a video amplifier within said computer display device; and

generating a video data signal, for receipt by said video amplifier, in response to said application program, said video data signal included within said window control signal.

38. The method of Claim 37 comprising:

providing a high-voltage power supply (HVPS) and an automatic beam limiter (ABL) device within said computer display device;

generating a high-voltage signal using said HVPS and providing said high-voltage signal to the anode of said CRT device; and

sampling the current of said high-voltage signal using said ABL device, wherein said ABL determines when to limit beam current supplied to said CRT.

39. The method of Claim 38 comprising using said ABL device for providing an analog window signal to said video amplifier.

40. The method of Claim 39 wherein providing said analog window signal to said video amplifier determines the gain of said video amplifier.

41. The method of Claim 36 wherein generating said high-luminance viewing window includes displaying information within said viewing window, derived from said video data signal, distinct from information displayed outside said viewing window.

42. The method of Claim 36 further comprising generating a horizontal synchronization signal (H Sync) and a vertical synchronization signal (V Sync).

43. A computer-readable medium containing instructions for performing steps comprising:

running an application program on a host computer;

generating a window control signal in response to said application program, said window control signal including a video data signal;

generating a window information signal in response to said window control signal;

using a display control device for receiving a video signal and said window information signal, for processing said video signal in response to said window information signal; and

providing a processed video signal to a computer display screen to generate said high-luminance viewing window thereon.

44. The computer-readable medium of Claim 43 wherein producing a high-luminance viewing window includes providing information, derived from said video data signal, for display within said window wherein said windowed information is distinct from information displayed outside said viewing window

45. A system for generating high-luminance windows on a display device, comprising:

means for running an application program, said application program providing a video data signal;

means for generating a window control signal in response to said application program;

means for generating a window information signal in response to said window control signal;

means for processing said window information signal using a display control device for receiving a video signal and said window information signal; and

means for applying a processed video signal to a computer display screen to generate said high-luminance windows.